

REMARKS

Reconsideration of the above identified application is respectfully requested.

On May 23rd, a telephone interview was conducted between the undersigned attorney and the examiner to discuss the objection and rejection of record.

Agreement was reached to amend claim 1 to emphasize the flow communication between the first counterheat channel 30 and the first main flow channel 30.

And, agreement was reached to place method claim 5 in independent form.

Claim 1 recites several flow channels in flow communication which distinguishes over reference Uchida in which the flow circuits lack corresponding flow communication.

Independent method claim 5 is the equivalent of previous dependent claim 5, and complies with MPEP 821.04 for method-of-use claims in dependent or independent form.

MPEP 2113 is inapplicable since method-of-use claim 5 is not a product-by-process claim.

Subject to an updated patent search by the examiner, all claims should now be allowable over the references of record, including Uchida.

Applicants maintain the traverse of the objection to claims 5-9 since these claims fall within the scope of MPEP 821.04, and not MPEP 2113.

However, claim 5 has been amended to independent form as requested by the examiner.

Accordingly, withdrawal of the objection to these claims is warranted and is requested.

Applicants maintain the traverse of the rejection of claims 1-3 under Section 102(b) over Uchida.

Claim 1 recites a first counterheat channel 30 joined in flow communication with the first main channel 28, and means

36 for injecting an evaporative coolant 38 into the first counterheat channel 30.

A second heat exchanger 26 includes a second main flow channel 32 and a second counterheat channel 34 is joined in flow communication with the first heat exchanger.

In other words, these elements are structurally and functionally interconnected so that the evaporative coolant 38 is injected into the first counterheat channel 30 in which will flow the primary gas stream 18.

Figures 1 and 3 of Uchida illustrate two alternate embodiments of the two modules 11,12, and figure 2 illustrates an exemplary embodiment of one of the modules, all as described in the Uchida reference.

In figure 1 of Uchida, one flow circuit (10) is provided for the chilled water 10 in one leg through the first module 11, and in a series leg through the second module 12. In figure 3, the first circuit 10 is S-shaped versus the U-shape in figure 1.

Also in figures 1 and 3 is a second flow circuit (13) for the cooled water 13 in one U-shaped leg in the first module 11, and in another U-shaped leg in the second module 12, both legs having a common inlet junction for the cooled water 13.

Figures 1 and 3 further illustrate a third flow circuit (101) for spraying the absorption solution 101,111 into the first module, and a fourth flow circuit (102) for spraying the absorption solution 102,112 into the second module 12.

Note, quite fundamentally, that all four flow circuits inside the two modules 11,12 are independent from each other, and the corresponding fluids being channeled therethrough remain separated from each other, and do not mix.

This is also illustrated in figure 2 of Uchida for one of the modules 11,12. Notice the first circuit 10 which channels the chilled water 10 through the bank of pipes 9 inside the module.

Notice the second circuit 13 which channels the cooled water 13 through the bank of pipes 17 and 15 inside the module.

And, notice the separate circuit which sprays the absorption solution 6 outside the pipes 17; and the separate circuit which sprays the refrigerant 7 outside the pipes 9; and the separate circuit which channels the refrigerant vapor 14a outside the pipes 15.

Note again, that the water circuits 10 and 13, are independent from the three circuits for the absorption solution 6, liquid refrigerant 7, and refrigerant vapor 14a.

The several circuits in Uchida are expressly independent, and do not allow the absorption solution 101,102,6; or the liquid refrigerant 7; or the refrigerant vapor 14a to join or mix with the chilled water 10 or the cooling water 13 in their independent circuits.

On page 3 of the final office action, the examiner contends that "Uchida discloses ... a first counterheat channel (13) joined in flow communication" with the "first main flow channel (10)."

However, as indicated above the pipes that carry water 13 are not connected to the pipes that carry water 10, and therefore, there is no flow communication between these pipes.

The examiner also contends that Uchida discloses "means (111) for injecting an evaporative coolant into the first counterheat channel [13]."

However, the spray equipment for the absorption solution 111 in Uchida sprays that solution outside the pipes carrying the water 13, and not "into" those pipes. Nor, has the examiner shown any similarity between that absorption solution and the evaporative coolant recited in claim 1.

For these basic reasons, Uchida cannot and does not anticipate claim 1.

Claim 2 recites that the second counterheat channel 34

is joined in flow communication with the first main channel 28. This then permits the primary stream to flow therebetween.

This distinguishes over Uchida since the various flow circuits thereof are independent as explained above.

The examiner contends on page 3 of the final office action that Uchida discloses "the second counterheat channel [13] is joined in flow communication with the first main channel [10]."

To the contrary, the pipes that carry the water 13 are independent of the pipes that carry the water 10, and therefore, there is no evidence in Uchida that these sets of pipes are joined in flow communication with each other, which would render inoperative the apparatus of Uchida for its intended purpose.

Claim 3 recites means 36 for injecting an evaporative saturant 38 into the second counterheat channel 34, which channel is joined in flow communication with the first main channel, and therefore receives the primary stream therefrom for saturation thereof.

The examiner contends at page 3 that Uchida discloses "means (112) for injecting an evaporative saturant into said second counterheat channel [13]."

However, the spray equipment for the absorption solution 112 in Uchida sprays that solution outside the pipes carrying the water 13, and not "into" those pipes. Nor, has the examiner shown any similarity between that absorption solution and the evaporative saturant recited in claim 3.

Accordingly, withdrawal of the rejection of claims 1-3 under Section 102(b) over Uchida is warranted and is requested.

Applicants note the allowability of objected-to claims 4 and 10-33, but the rewriting thereof is not warranted in view of the above remarks.

In para. 4 of the office action the examiner notes the

allowability of claim 5-9, but those claims have only been objected-to and not rejected under Section 112, second paragraph.

Nevertheless, claim 5 has been amended to independent form and should now be in condition for allowance, along with claims 6-9 dependent therefrom.

The additional references cited, but not applied, have been noted.

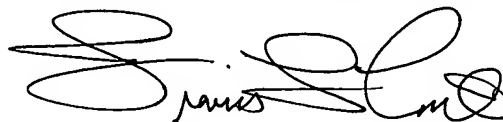
In accordance with the duty imposed by 37 CFR 1.104 and MPEP sections 707, 707.05, 707.07, and 707.07(g), the examiner is requested to reconsider all the art of record, including the additional references not applied, to ensure full compliance with the required thoroughness of examination.

In re Portola Packaging, Inc., 42 USPQ2d 1295 (Fed. Cir. 1997) emphasizes the importance of complying with this duty to ensure that all references of record have been fully considered by the examiner in the various combinations thereof. And, the Board of Appeals has further elaborated on the importance of this examiner duty in Ex parte Schricker, 56 USPQ2d 1723 (B.P.A.I. 2000).

A drawing amendment is being filed concurrently herewith to insert a reference numeral in figure 5.

In view of the above remarks, allowance of all claims 1-33 over the art of record is warranted and is requested.

Respectfully submitted,



Francis L. Conte
Registration No. 29,630
Attorney for Applicant

Date: 24 May 2005

6 Puritan Avenue
Swampscott, MA 01907
Tel: 781-592-9077
Fax: 781-592-4618